Oracle® Enterprise Manager Ops Center

Keeping Your Firmware Up-to-Date

12*c* Release 2 (12.2.0.0.0)

E48165-01

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This guide provides an end-to-end example for how to use Oracle Enterprise Manager Ops Center.

Introduction

This guide describes how to keep your firmware up-to-date in your data center.

Oracle Enterprise Manager Ops Center uses firmware profiles to provision, or update firmware on an asset. In this guide, you will be taken through the steps of how to download firmware images, run a firmware compliance report, and update the firmware in Oracle Enterprise Manager Ops Center.

Oracle Enterprise Manager Ops Center supports a wide variety of hardware resources. It supports the firmware update of components such as RAID Controllers, Expanders, Disks and PDUs. You can now manage the firmware for a variety of hardware resources in Oracle Enterprise Manager Ops Center.

What You Will Need

You need the following to update the firmware in your systems:

- Enterprise Controller installed and configured in connected mode.
- A local software library setup to download the latest firmware updates.
- Discover and manage the server hardware for which you need to update the firmware.
- If you are uploading the firmware image, then the firmware image and the firmware metadata.

You require the following roles to complete the procedures:

- **Profile and plan admin**: Create and manage the firmware profiles and plans.
- **Storage admin**: Setup the initial software library.
- **Update admin**: Update the firmware.

Updating Your Firmware

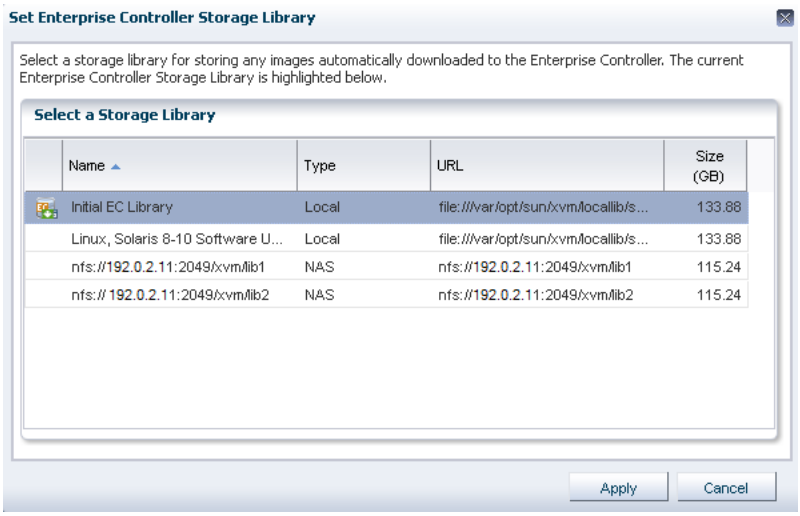
Complete the following tasks in this example to update the firmware using Oracle Enterprise Manager Ops Center:

- Storage Library Setup and Downloading Firmware Images

- Uploading Firmware Images
- Run a Firmware Compliance Report
- Apply the Firmware Deployment Plan

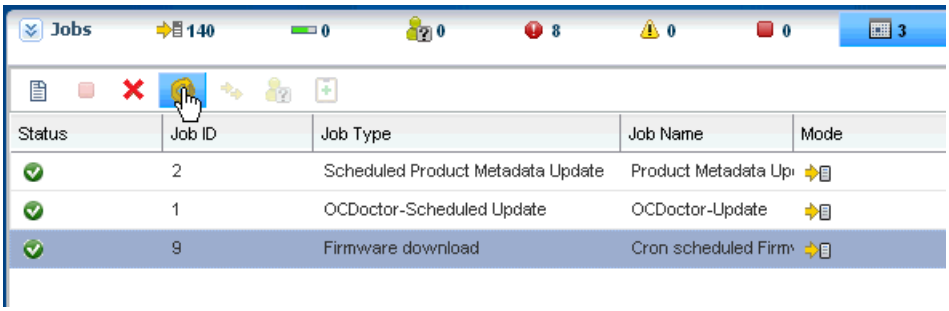
Storage Library Setup and Downloading Firmware Images

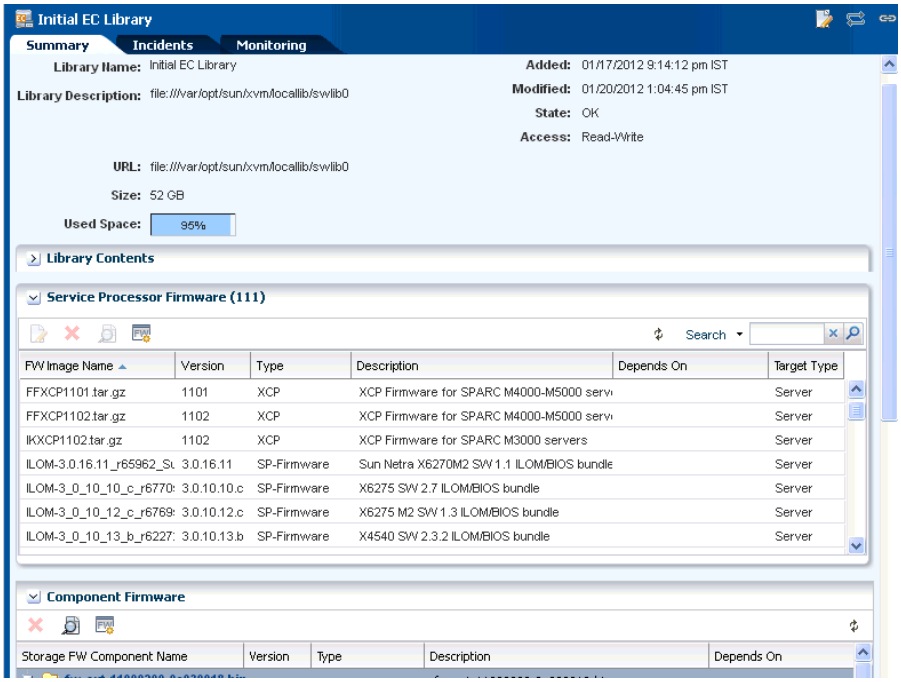
When you install and configure the Enterprise Controller, there is an Initial EC Library which is set as the default storage library to download the images from Knowledge Base.



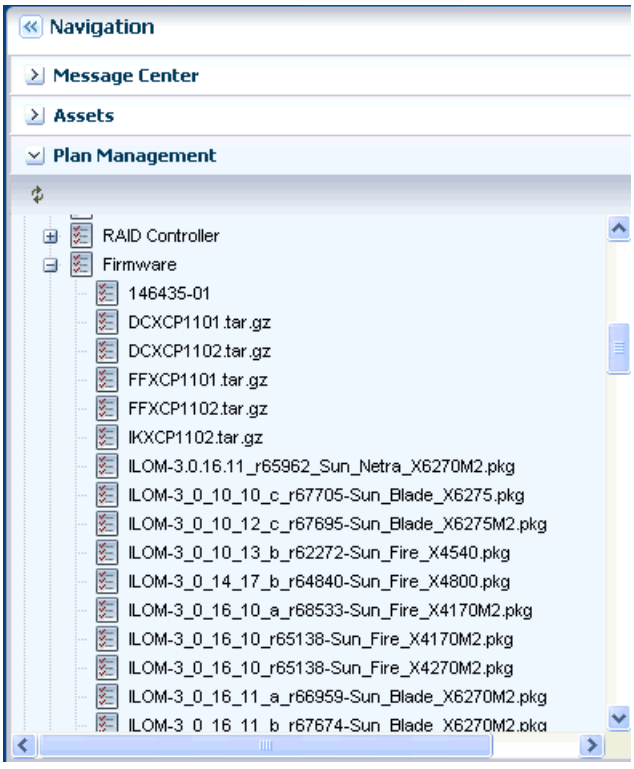
An automatic job is scheduled at run at 3.00 a.m daily to download the latest firmware images. The Enterprise Controller time is followed for the download schedule.

For the first time, the job takes around 1 to 2 hours to complete. Thereafter, only the latest released version of a firmware image are downloaded. You can view all the firmware images in the default library. You can also select the scheduled job and run the firmware image download job any time.





For every firmware image downloaded, a firmware profile and plan are created by default. You can view the default firmware profiles and plans in the Plan Management section.

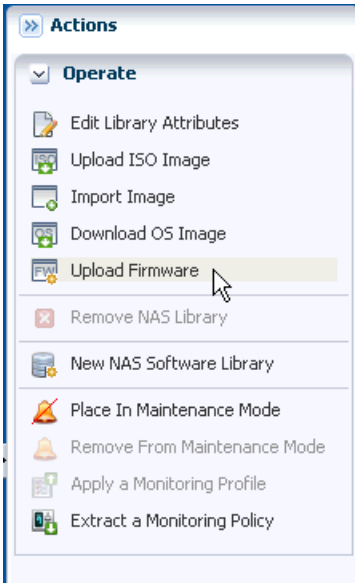


Select a server to find the latest firmware profiles available for it.

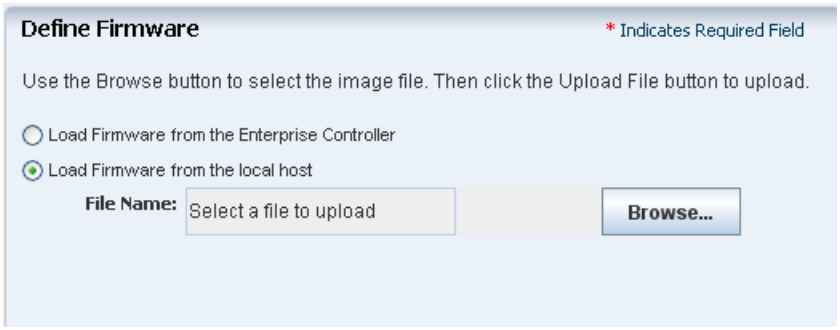
Uploading Firmware Images

You can also upload firmware images to the storage libraries. It is required that the firmware image to be uploaded has the metadata details or you have to provide the firmware image metadata details during upload. See *Oracle Enterprise Manager Ops Center Feature Reference Guide* or more information about uploading firmware images.

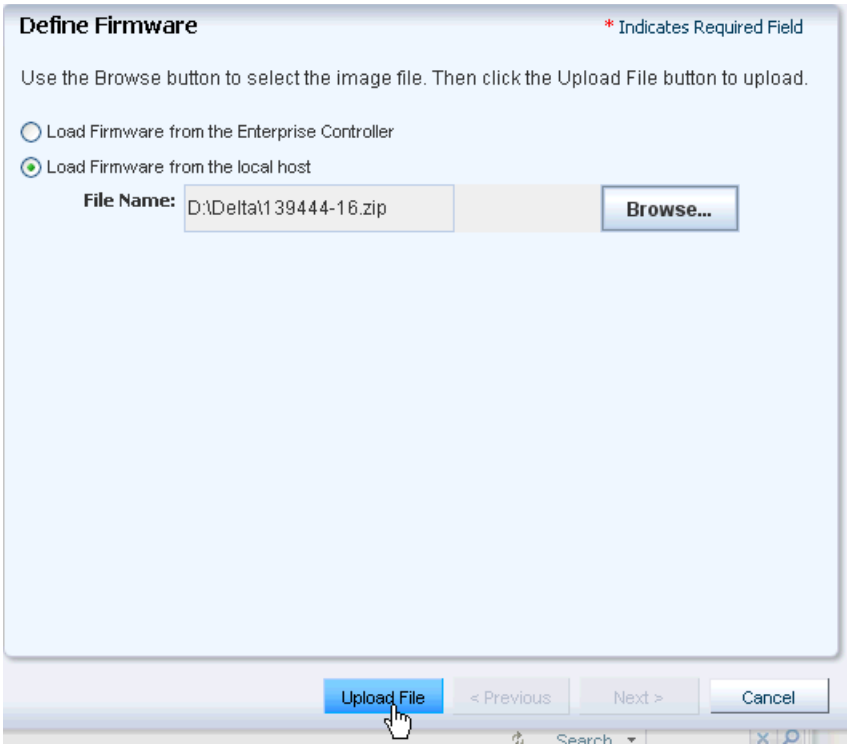
1. Select a software library to which you want to upload the firmware image.
2. Click **Upload Firmware** in the Actions pane.



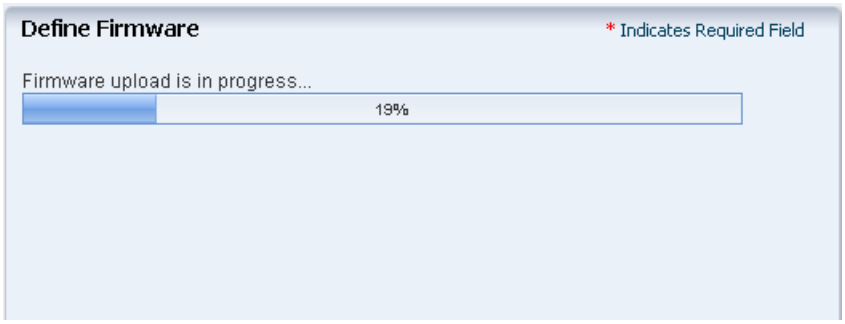
3. You can have the firmware file on the Enterprise Controller, or on the local host where you are running the UI. Select the firmware file from that location.



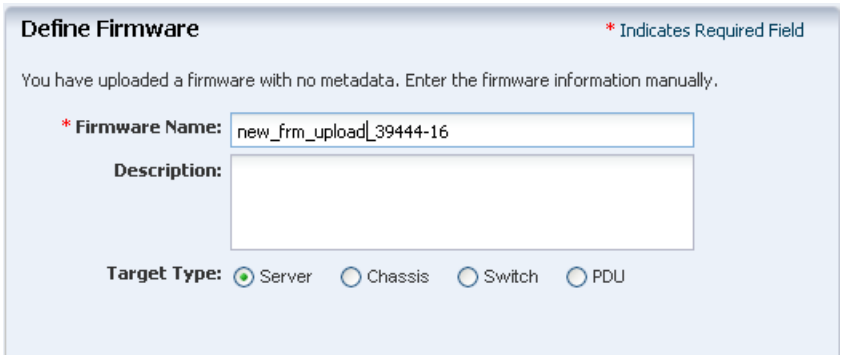
4. Select the file and click **Upload File**.



5. The selected image starts uploading. The upload progress status appears.



6. If the uploaded firmware image has the firmware metadata details, then the details of the firmware image are taken from the metadata. If the image does not have metadata, then you must enter the details of the firmware.

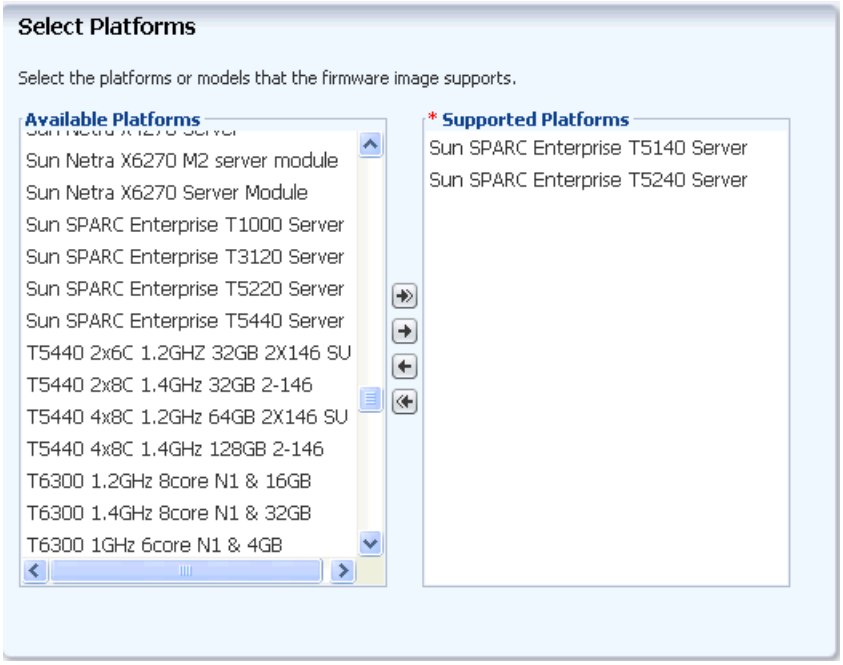


7. Enter the name of the firmware image and description.
8. Select the target hardware type to which the firmware image is applicable.

Click **Next**.

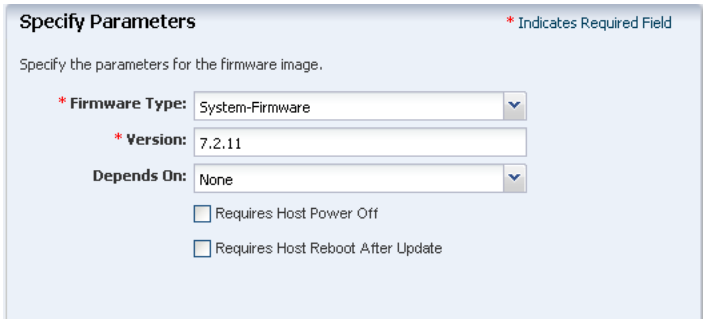
9. Depending on the selected target type, all the available platforms are listed. From the README file of the firmware image, you can view the list of supported platforms. Select the platforms and move to the **Supported Platforms** list.

   Click **Next**.



10. Specify the following information for the firmware:

    - Specify the type and version of the firmware image. The version number of the firmware image must match the version number of the firmware image file. For example, the uploaded firmware image version is 7.2.11.
    - If the firmware image is dependent on any other firmware image, then select those images from the list. In this example, it is not dependent on any other firmware image, therefore select **None**.
    - If the firmware README file states that the server must be shutdown before updating the service processor, then select **Power Off**. You must shut down the server before you provision the firmware.
    - If the server requires a reboot after updating the service processor, then select the option to reboot the system after the firmware update.

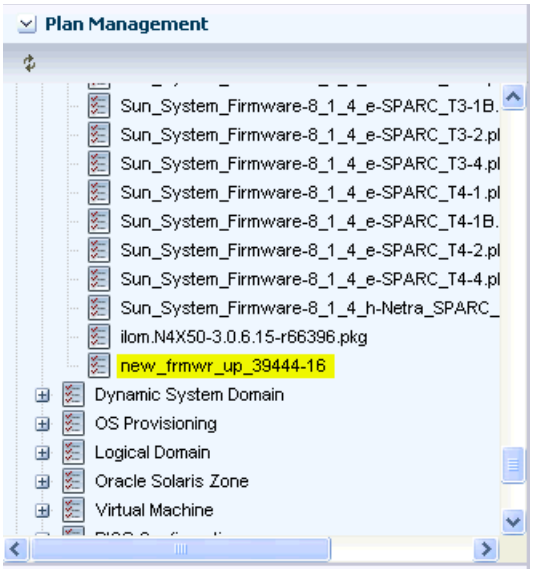


Click **Next**.

11. Review the summary of information provided for the firmware and click **Finish** to upload the firmware.

The firmware image is uploaded onto the selected software library.

When you upload a firmware image, a default firmware profile and deployment plan is automatically created.



You can edit, copy or duplicate this firmware profile or the deployment plan, and apply the plan on one or many servers.

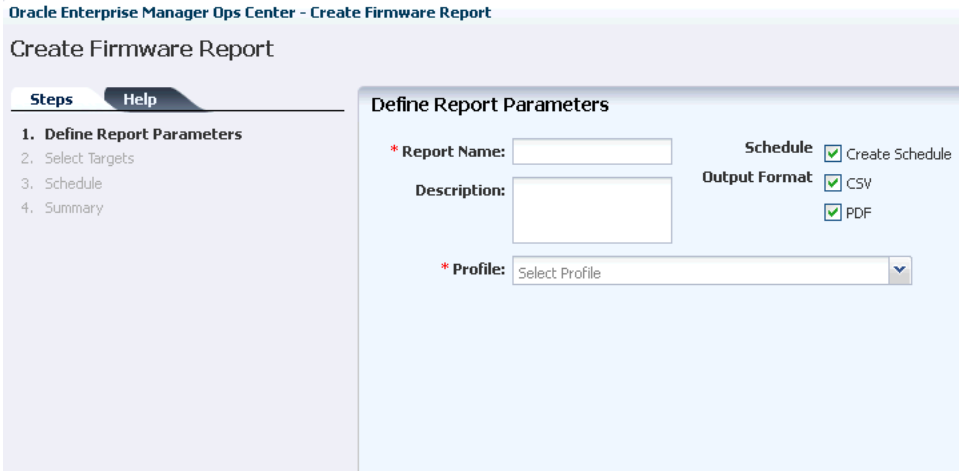
Run a Firmware Compliance Report

The advantage of running a firmware compliance report is to identify the condition of the firmware on a specific asset or group of assets.

Select on the targets for which you want to run the compliance report. If your servers are already grouped according to the server type, then select the group to run the report.

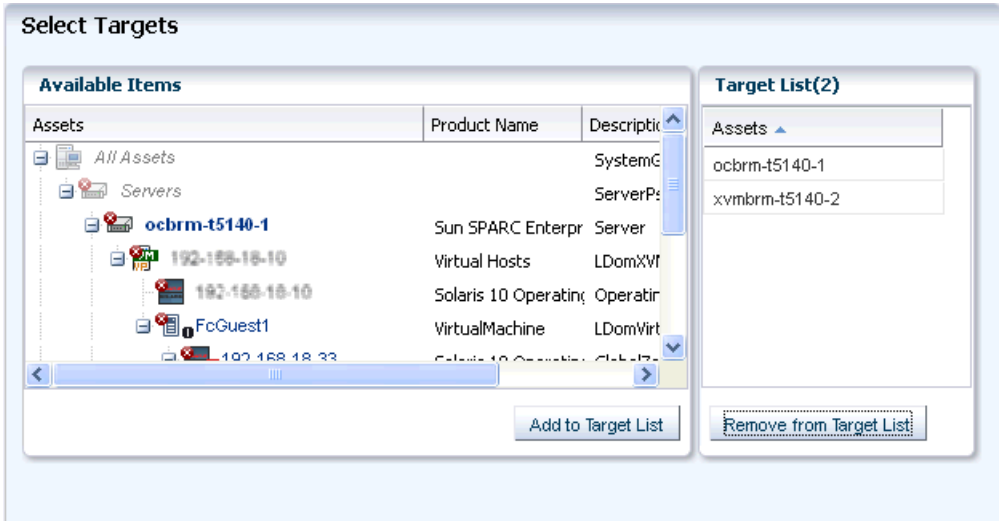
1. Select **Reports** from the Navigation pane.
2. Select **Firmware Reports** option in the Reports section.
3. Click **Create Firmware Report** in the Actions pane.

   The Create Firmware Report wizard is displayed.
4. Define the following parameters for the report:
   - Name and Description for the report.
   - Select the firmware profile to which you want to compare the targets' firmware.
   - Select the option to view the report in CSV and PDF formats also.
   - Deselect the **Create Schedule** option to run the job immediately.



Click **Next** to select the targets.

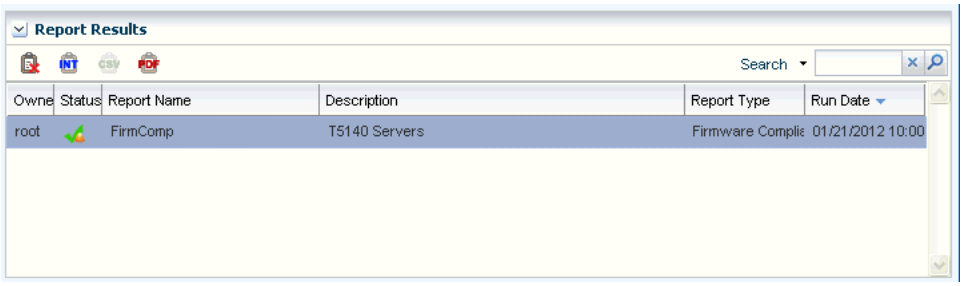
5. Select the target assets from the list. You can even select a group of servers.



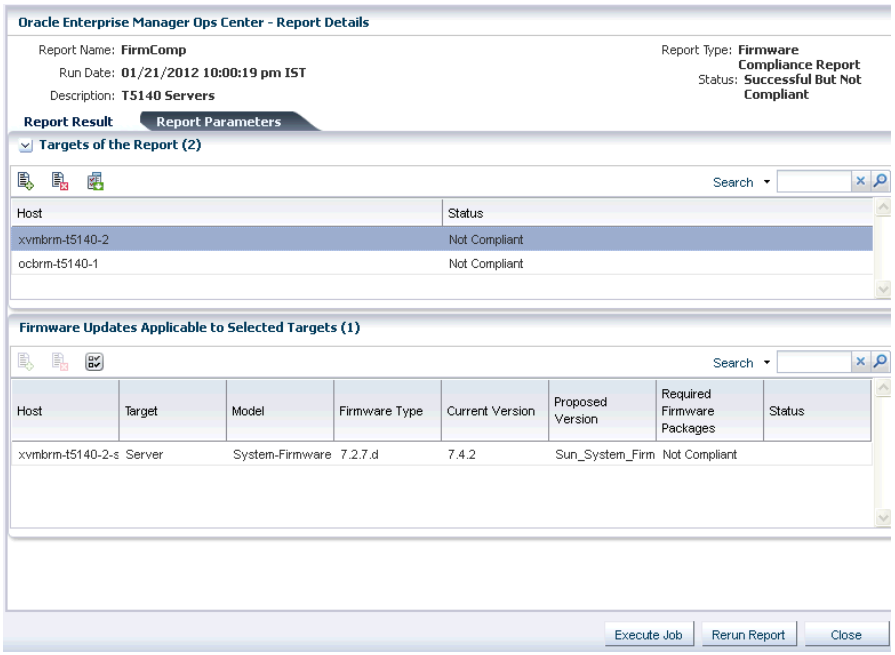
Click **Next** to view the summary of report parameters.

6. Review the report parameters and click **Run and Close**.

When the job is completed, the status of the report is displayed under Report Results.



Select the result and click the Interactive icon to view the results on the UI. The report result is displayed.



Apply the Firmware Deployment Plan

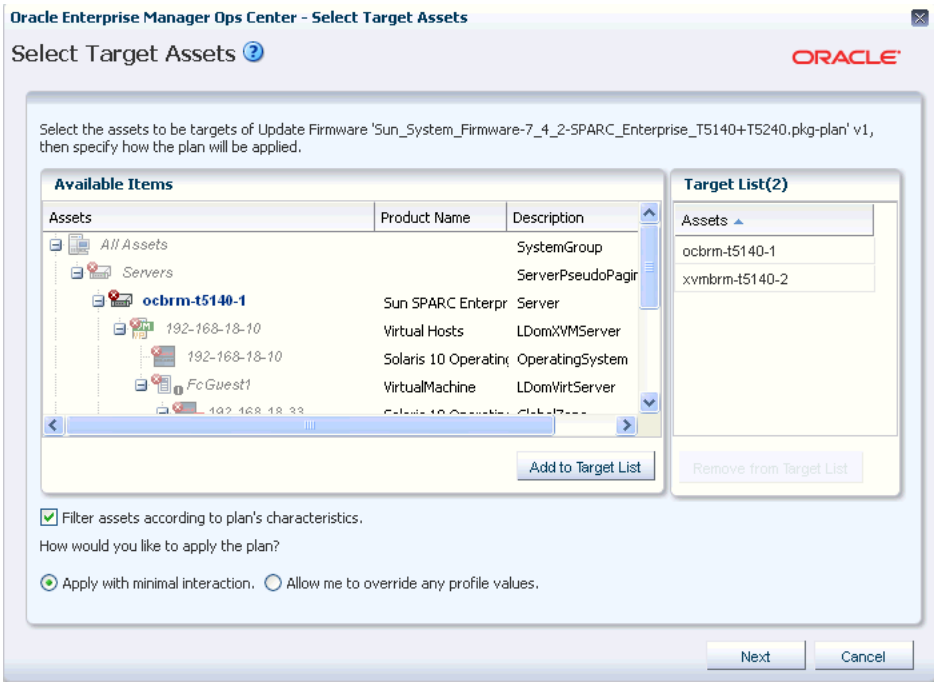
From the report result, you can view the servers that are compliant and not compliant with the selected firmware profile. You can update the firmware using one of the following methods:

- To update all the Not Compliant servers, click **Execute Job** in the report result window.
- To update only selected servers, apply the firmware deployment plan on selected targets.

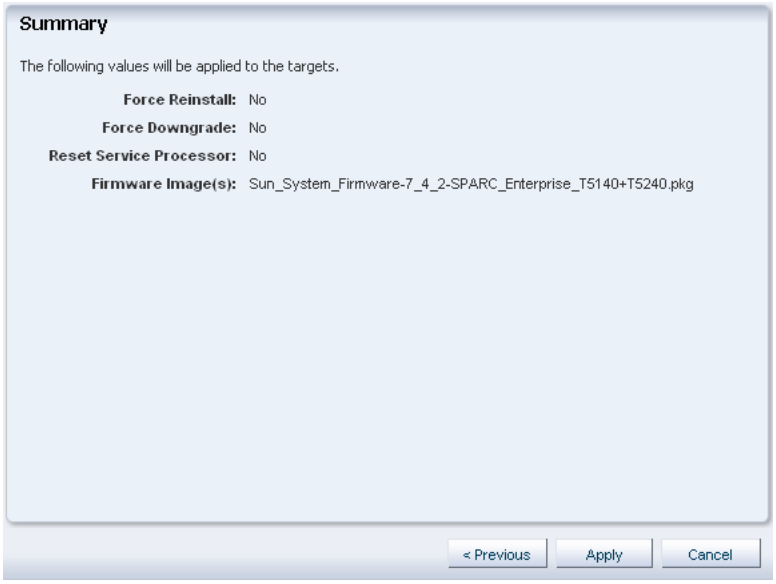
The following procedure describes how to apply the firmware deployment plan on the selected servers:

1. Shut down the server gracefully. Most of the firmware update requires that the server is not in running state when updating the firmware. The firmware image contains the power off command which results in a hard shut down of the server.
2. To apply the firmware deployment plan on the selected targets, select the plan from the Plan Management section, and click **Apply Deployment Plan**.
3. Select the targets on which you want to apply the plan. Apply the plan with minimal interaction as you do not want to change any parameters of the plan and the profile.

   If you are trying to install a firmware version lower than the existing version on the server, then you must edit the profile or apply the plan with the option to override the values. In the firmware profile, select the option **Force Downgrade** for a successful update firmware job.



4. Schedule to run the job now and click **Apply** to run the update firmware job on the selected targets.



Run the update firmware job and view the hardware summary for the updated firmware image details.

You can now obtain firmware images and use them to update your hardware assets in Oracle Enterprise Manager Ops Center. No matter on how many assets you want to provision firmware, a consistent firmware image provisioning is achieved using the firmware profiles and deployment plans.

What's Next?

You can provision operating system of your choice in the hardware. See Related Articles and Resources for more information about provisioning operating systems.

Related Articles and Resources

The Oracle Enterprise Manager Ops Center 12c documentation is located at http://docs.oracle.com/cd/E40871_01/index.htm.

For more detailed information about firmware provisioning, refer to the following guides:

- *Oracle Enterprise Manager Ops Center Feature Reference Guide*
- *Oracle Enterprise Manager Ops Center Administration Guide*
- *Oracle Enterprise Manager Ops Center Feature Reference Appendix Guide*

See Deploy How To library at http://docs.oracle.com/cd/E40871_01/nav/deployhowto.htm.

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